

THE HLA

FactsBook

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A*02 - A2, A23, A210

Peptide-binding specificity

Allotype/ serotype	Peptide sequence	Source protein	Refs
A*0201			
Motif	Position		
	123456789		
	L E V K V		29-30
	M K L L		
	P I		
Endogenous peptides	LLDVPTAAV	IP-30 signal sequence -11 to -3	30-33
	TLWVDPYEV	TIS21	30,33
	FLLDHLKRV	Breakpoint cluster region protein	34
	LLLDVPTAAV	IP-30 signal sequence -12 to -3	31
	ULFRGGPRGLLAV	Unknown	34
	SLLPATIVEL	Regulatory subunit phosphatase 2A	30,33
	YLLPATIVHI	Nuclear protein p68	30,33
	FLLPTGAEA	Cathepsin G	34
	LLDPKLUYLL	CD3 ζ chain	34
	SLPHFHHPET	Dematin	34
	MLLSVPLLLG	Calreticulin -17 through -8	31
	VLSPADKTNVK	Globin α chain	34
	LLYDMVUGDIP	c-pim	34
	LLLDVPTAAVQ	IP-30 signal sequence -12 to -2	32
	LLLDVPTAAVQA	IP-30 signal sequence -12 to -1	31
	VLFRGGPRGLLAVA	SSR α signal sequence	31
	EXVDXXKEV	Unknown	30
	SXPSSGGXGV	Unknown	30,33
	GXVPFXVSV	Unknown	30,33
	SXXVRADEV	Unknown	30,33
	VXXPKXXXK	Unknown	30
	KXNEFVXXX	Unknown	30,33
	MVDGTLILL	HLA-E signal sequence	35
	UIALFALPF	Interferon α / β receptor α chain	34
	XMAPEILMRS	Ribosomal S6 kinase	34
	IPRAEVAELL	c-fes	34
	FIYNADLMNU	GM-CSF receptor α chain	34
	KVNVDEVGGE	Globin β chain	34
	KQYESVLMVSI	IL-7	34
T-cell epitopes	LLGRNSFEV	p53 264-272	36
	LLCLIFLLV	HBV envelope protein HBs 251-259	37
	LENATDIAV	HIV-1 envelope protein gp160 815-823	38
	LLMGTLGKY	HPV type 16 E7 82-90	39
	LLPGYPVYV	HTLV Tax 11-19	40
	LLCPAGHAV	HCV NS3 1169-1177	41
	ILKEPVHGV	HIV-1 reverse transcriptase 476-484	42
	ILAGYGAGV	HCV NS4B 1851-1859	43
	GLQDCTMLV	HCV NS5B 2727-2735	44,45
	GLHCYEQLV	HPV type 11 E7 21-30	46
	SINAPTAAY	HCV NS4B 1789-1797	47
	SLYADSPSV	HBV pol 816-824	48

A*02 - A2, A203, A210

Allotype/ serotype	Peptide sequence	Source protein	Refs
	TLTSCNTSV	HIV-1 envelope protein gp120 197-205	46
	ALQDSGLEV	HIV reverse transcriptase 652-660	47
	CLGGLTMV	EBV LMP2A 426-434	48
	RLTSCNTSV	HIV envelope protein gp120 199-207	47
	RLVTLKDIV	HPV type 11 E7 4-12	44
	H LGNVKYL	<i>P. falciparum</i> TRAP 3-11	49
	WLSLLVFFV	HBV envelope protein HBs 335-343	37
	DLMGYIPLV	HCV nucleocapsid protein 132-140	50
	FLKQHFQIV	HPV type 11 E7 47-55	44
	FLWGPRLV	MAGE-3 271-279	51
	MLGTHMEV	pmel 17 gp100 178-186	52
	LLDYQGMFLV	HBV envelope protein HBs 260-269	37
	LLDFVRFMGV	EBV EBNA3C 284-293	53
	LLALLSCLTV	HCV nucleocapsid protein 178-187	43
	LLFNILGGWV	HCV NS4B 1807-1816	43
	SLLNATDIAV	HIV-1 envelope protein gp160 814-823	38
	SLADINSLAV	pmel 17 gp100 570-579	52
	KLWVTVYGV	HIV-1 envelope protein gp160 32-41	38
	KLVALGINAV	HCV NS3 1406-1415	34
	GLSPTVWLSV	HBV envelope protein HBs 348-357	37
	VLYRYGSFSV	pmel 17 gp100 476-485	53
	ILRGTSFVYV	HBV pol 773-782	45
	QLRRHIDLLV	HCV envelope protein E1 257-266	41
	FLPSDFPFSV	HBV nucleocapsid core protein 18-27	56
	VLDVGDAYFSV	HIV-1 reverse transcriptase 267-277	57
	TLGIIVCPI	HPV type 16 E7 86-93	39
	YLNKIQNSL	<i>P. falciparum</i> circumsporozoite protein 334-342	38
	GLSRYVARL	HBV pol 455-463	43
	GLCTLVAML	EBV lytic cycle antigen BMLF1 280-288	59
	LLWTLVLL	EBV LMP2A 329-337	59
	ILTVILGVL	MART-1 32-40	40
	SLYNTVATL	HIV-1 p17 gag 77-85	51
	KLTPLCVTL	HIV-1 envelope protein gp160 120-128	38
	FLLSLGIHL	HBV pol 575-583	45
	MLLAVLYCL	Tyrosinase 1-9	62
	YLEPGPVTA	pmel 17 gp100 280-288	54,53
	ALMPLYACI	HBV Pol 655-663	45
	KLGEFYNQM	Influenza B nucleoprotein 85-93	64
	LLDGTATLRL	pmel 17 gp100 457-466	53
	YLLPRRGPRL	HCV nucleocapsid protein 35-44	43
	CLLDILDTAGL	Mutated p21 ras protein 51-61	66
	YMGTMISQV	Tyrosinase 369-377	62
	YMDGTMSQV	Tyrosinase (post-translational modification) 369-377	67
	AMASTEQNV	<i>M. tuberculosis</i> ESAT-6 82-90	68
	FIDSYICQV	X-chromosomal protein SMCY	69
	YIGEVLVSV	Homology to myosine 51-59	70
	ITDQVFGSV	pmel 17 gp100 209-217	55
	KTWGQYWQV	pmel 17 gp100 154-162	55
	AAGIGIETV	MART-1 27-35	71

106

A*02 - A2, A203, A210

Allotype/ serotype	Peptide sequence	Source protein	Ref
	VMNLLQYVV	Glutamic acid decarboxylase 114-123	7
	AMLGHTMEV	pmel 17 gp100 177-186	75
	IAGNSAYEVV	HCMV glycoprotein B 619-628	88
	GILGFVFTL	Influenza A matrix protein 58-68	73,74
	GIAGGLALL	<i>P. falciparum</i> TRAP 500-508	89
	KIPGSLAPL	HER2/neu 369-377	73
	AFHHVAREL	HIV-1 nef 190-198	76
	AXWGFFPVX	Unknown	91
	RVIEVLQRA	HIV-1 envelope protein gp160 829-837	88
	YMDDVVLGA	HBV pol 551-559	93
	YMLDLQPETT	HPV type 16 E7 11-20	89
	TGAPVTYSTY	HCV NS3 1287-1296	77

A*0202

Motif Position
123456789
 L L

T-cell epitopes	MINAYLDKL	<i>P. falciparum</i> STARP 523-531	89
	AFHHVAREL	HIV-1 nef 190-198	76

A*0203

Motif not characterized

T-cell epitope	SVRDRLARL	EBV EBNA3 596-604	79
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A*0204

Motif Position
123456789
 L E L L
 F I

Endogenous peptides	YLLPAIVHL	Nuclear protein p68	58
	SLLPAIVEL	Regulatory subunit phosphatase 2A	84
	LLOVPTAAV	IP-30 signal peptide -11 to -3	89
	VXXPKQCCX	Unknown	91
	FKKEGDRAK	Unknown	89
	KXNEPVKXK	Unknown	89
	SKPSGGKGV	Unknown	89
	FVXDXXYRX	Unknown	89

T-cell epitope	AFHHVAREL	HIV-1 nef 190-198	76
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167